

Claims

1. Process for the preparation of a full-ceramic dental restoration, comprising heat pressing of a tooth coloured pressing glass on a fully or partially supporting structure of yttria doped tetragonal zirconia (YTZP), comprised of yttria doped tetragonal zirconia ceramic having a grain size, as
5 measured by the linear intercept method, of less than $0.6\text{ }\mu\text{m}$, wherein the pressing glass has a thermal expansion coefficient (TEC) of between 9.0 and $11.0\text{ }\mu\text{m/m.K}$ (measured in the range of from 25 to 500°C) and wherein the pressing glass has a pressing temperature of between 750 and 1000°C .
2. The process according to claim 1, wherein the supporting structure
10 is comprised of densely sintered ceramic produced by CAD/CAM technology.
3. The process according to claim 2, wherein the ceramic is milled by a CAD/CAM-system in the green state or in a partially sintered state, and subsequent sintering to full density.
4. The process according to claim 1 or claim 2, wherein the supporting
15 structure is milled out of a hot isostatically pressed zirconia.
5. The process according to claim 1, wherein the supporting structure is formed by electrophoretic deposition of zirconia from a slurry, followed by sintering to full density.
6. The process according to claim 1, wherein the structure is kept short
20 by 0.5 to 2.0 mm and the pressing glass is forming an aesthetically pleasing shoulder without showing the core at the margin.
7. The process according to any one of the claims 1-6, wherein a liner is applied to the supporting zirconia structure with a melting point less than 50°C lower than the pressing temperature of the pressing glass.
- 25 8. The process according to any one of claims 1-7, wherein the connector to the press pellet reservoir and the specimen is a continuous flow plate having a thickness of 1.5 - 2.5 mm .

9. Full-ceramic dental restoration, comprising a fully or partially supporting structure of yttria doped tetragonal zirconia (YTZP) and a heat pressed tooth coloured pressing glass, which restoration is modelled to be in occlusal contact with opposing teeth and in mesio-distal contact with
- 5 neighbouring teeth.
10. The full-ceramic dental restoration of claim 9, obtainable by the process of any one of the claims 1-8.